

IN THE ABSTRACT:

A-~~The~~ transmitter (4) for a controlled-shape-switched-signal-on-a-communication line (1) comprises a signal generator including a capacitor (19) producing the switched signal to be applied to the line. The capacitor is charged by a charging current (I_e) in response to an input signal (TX) so as to define an edge of the switched signal. ~~The~~ charging means (24, 25) comprises through a feedback loop responsive to the capacitor voltage (V_O) for generating a feedback current (I_E) having a continuous magnitude that is a progressive function of the capacitor voltage, the charging current (I_e) being a function of the feedback current (I_E). Resistors (R_1 , R_{41} , R_2) define an RC circuit with the capacitor (19) enabling the time constant of the feedback current to be controlled. Preferably, the The feedback loop generates first and second feedback voltages (V_{H1} , V_{L1}) one of which is a rising function of the capacitor voltage (V_O) and the other is a falling function of the capacitor voltage (V_O). The feedback current (I_E) is generated first as a function of one of the feedback voltages (V_{H1} , V_{L1}) and subsequently as a function of the other of the feedback voltages, ~~so that the rate of change of the feedback current (I_E) increases with time while the one of the feedback voltages is selected and decreases with time while the other of the feedback voltages is selected.~~

~~Preferably, the rate of change of the feedback current (I_E) is a function of the capacitor voltage (V_O) such that the capacitor voltage varies substantially as an exponential function of time, at least for a part of the edge of the switched signal (40, 42, 44, 46) and may be a linear function of time for another part (41, 43, 45) so as to approximate closely a sinusoidal half cycle with few harmonics.~~